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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,781	09/06/2006	Anne Boer	TS1409 US	4517
23632 7590 10/29/2008 SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463				
EXAMINER				
LEUNG, JENNIFER A				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,781

**Applicant(s)**

BOER ET AL.

**Examiner**

JENNIFER A. LEUNG

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment filed on July 28, 2008 has been carefully considered. Claims 9-11 and 13 are cancelled. Claims 1-8 and 12 are under consideration.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Shukunobe et al. (US 4,965,051).

Regarding claim 1, Shukunobe et al. (FIGs. 1 and 2; column 5, line 51 to column 6, line 46) discloses a filter system for use in a reactor, the filter system comprising a filter (i.e., a solids outflow preventing screen **40**) to separate fluid from a mixture of particulate matter (i.e., biocatalyst **36**) and a fluid, and having a filter housing (i.e., the upper cylindrical section of portion **14**) adapted to connect to the reactor (e.g., defined by chambers **12** and **13**) and adapted to receive the filter **40**, wherein the filter **40** is retractable into the housing (see dotted lines in FIG. 1; also, FIG. 2 shows the filter **40** fully retracted). The recitation that the filter is retractable into the housing "for repair or replacement" is considered an intended use that does not impart further patentability to the claim. See MPEP 2114.

Regarding claim 2, the filter **40** is retractable through an aperture (i.e., defined by the opening at the upper end of cylinder portion **15**) in the reactor.

Regarding claim 3, the housing is detachably connected to the aperture (i.e., by bolts, not labeled, at flange **14C**; see FIG. 1; column 5, lines 57-61).

Regarding claim 4, the filter **40** has an export conduit to deliver filtrate from the filter (i.e., the inner tube **38**; see column 7, lines 56-63).

Regarding claim 5, the filter **40** is retracted into the housing by the export conduit **38** (see FIGs. 1, 2; column 6, lines 40-47).

Regarding claim 6, the housing has an outlet suitable for removing the filter **40** therefrom (i.e., portion **22** may be removed from portion **14** by detaching the clamp coupling **28**, and the filter **40** is capable of being removed through the open upper end of the cylindrical section of portion **14**; see FIG. 1).

Regarding claim 7, the housing has at least one sealing device (i.e., an o-ring, not labeled, provided on the funnel head opening **39**; see FIG. 2) to isolate the housing from the reactor.

Regarding claim 8, the filter **40** has a cap (i.e., the funnel head opening **39**) adapted to prevent settling of particulate matter on the filter (i.e., the slanted surface of element **39** inherently inhibits settling of particulate matter on the filter).

Regarding claim 12, Shukunobe et al. (FIGs. 1 and 2; column 5, line 51 to column 6, line 46) discloses a reactor comprising: a shell (i.e., walls defining chambers **12** and **13**); and a filter system comprising a filter (i.e., a solids outflow preventing screen **40**) and a filter housing (i.e., the upper cylindrical section of portion **14**) adapted to connect to the shell (i.e., at flange **14C**, using bolts), wherein the filter **40** can be retracted from the shell into the housing through an aperture located at the upper end of cylinder **15**. The recitation that the filter can be retracted from the shell into the housing "for repair or replacement" is considered an intended use that

does not impart further patentability to the claim. See MPEP 2114.

Instant claims 1-8 and 12 structurally read on the apparatus of Shukunobe et al.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 6, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garbo (US 2,526,651).

Regarding claim 1, Garbo (see FIGs. 1 and 2; see column 3, line 48 to column 4, line 61) discloses a filter system for use in a reactor 1, the filter system comprising a filter (i.e. a filter element 6) to separate fluid from a mixture of particulate matter (i.e., a catalyst powder) and a fluid, and having a filter housing (i.e., dome 11) adapted to connect to the reactor (e.g., by welding) and adapted to receive the filter, wherein the filter 6 is retractable into the housing 11 (i.e., the filter 6 may be pulled into the housing 11, after unfastening nuts 10). Garbo further discloses that the filter comprises, specifically, a “replaceable filter element” (column 3, line 35).

Accordingly, it would have been obvious for one of having ordinary skill in the art at the time the invention was made to configure and size the housing 11 in the apparatus of Garbo such that the filter was retractable into the housing, for enabling its specifically disclosed replacement.

Regarding claim 2, the filter 6 is retractable through an aperture in the reactor (see FIGs. 1 and 2, wherein an opening, not labeled, it provided at the top of the reactor 1).

Regarding claim 3, Garbo discloses that the housing 11 "may be secured to the reactor 1 by welding." (see column 4, lines 12-14). Garbo, however, is silent as to the housing 11 being detachably connected to the reactor 1, such that the housing is detachably connected to the aperture at the top of the reactor. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the housing in the apparatus of Garbo to be detachably connected to the reactor, on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because making elements separable was held to be obvious, *In re Duhlberg* 129 USPQ 148 (CCPQ 1961). For instance, one having ordinary skill in the art would have been motivated to configure the housing to be detachably connected and separable from the reactor, in the event that greater access to the components of the filter system for repair, assembly, replacement, etc. was necessary.

Regarding claim 4, the filter system (see FIG. 2) may further comprise an export conduit (i.e., a manifold 16, with discharge line 18) to deliver filtrate from the filter.

Regarding claim 6, the housing 11 has an outlet at its upper end, wherein the filter 6 is capable of being removed from the housing (e.g., for replacement) via the opening.

Regarding claim 7, the housing 11 has at least one sealing device (i.e., a suitable gasket 7; see column 4, lines 5-14; FIG. 1) to isolate the housing from the reactor.

Regarding claim 12, Garbo (see FIG. 1; see column 3, line 48 to column 4, line 26) discloses a reactor comprising: a shell (i.e., defining reactor **1**); and a filter system comprising a filter (i.e. a filter element **6**) and a filter housing (i.e., a dome **11**) adapted to connect to the shell **1**, wherein the filter **6** can be retracted from the shell into the housing **11** through an aperture (not labeled) located at the upper end of the shell **1** (i.e., after unfastening nuts **10**). Garbo further discloses that the filter comprises, specifically, a “replaceable filter element” (column 3, line 35). Accordingly, it would have been obvious for one of having ordinary skill in the art at the time the invention was made to configure and size the housing in the apparatus of Garbo such that the filter was retractable into the housing, for enabling its specifically disclosed replacement.

#### *Response to Arguments*

4. Applicant's arguments filed July 28, 2008 have been fully considered but they are not persuasive.

Applicant (at page 4, third paragraph) argues,

“Referring to Figs. 1 and 2 of Garbo, it appears that filter 6 is either too wide at the top and/or too long to be fully retracted into housing 11. Accordingly, Applicants do not believe that the claims as previously presented were anticipated by Garbo. Nevertheless, as currently amended, the claims are further distinguishable from the Garbo reference inasmuch as there is not any teaching or suggestion as to how the filters of Garbo could be retracted into the housing for repair or replacement.”

The Examiner respectfully disagrees. Garbo discloses that the filter comprises a “replaceable filter element” (column 3, line 35). Accordingly, it would have been obvious for one of having ordinary skill in the art at the time the invention was made to configure and size the housing in the apparatus of Garbo such that the filter was retractable into the housing, for enabling its

specifically disclosed replacement.

Applicant (at page 4, fourth paragraph) argues,

“As set forth in column 7, line 27 through column 8, line 9 of Shukunobe, inner tube 38 in conjunction with net or screen 40 is raised to the upper position when it is desired to wash the biocatalysts contained in the reactor. After washing of the biocatalysts, it is lowered to its normal operating position. It is not retracted in order to repair or replace the filter.”

The Examiner respectfully disagrees. The recitation that the filter can be retracted from the shell into the housing "for repair or replacement" is considered an intended use that does not impart further patentability to the claim. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, the filter would be capable of being repaired or replaced when the filter is retracted into the housing, e.g., by raising the inner tube 38 with screen 40 to its upper position and uncoupling the flanges 14C and 15A to provide access to the interior of the reactor.

#### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period



will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

\* \* \*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. LEUNG whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A. Leung/  
Primary Examiner, Art Unit 1797